

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A rotor for a permanent magnet motor of an outer rotor type, the rotor having a plurality of permanent magnets and disposed around a stator, the rotor comprising:

a frame ~~(17, 52)~~;
an annular iron core ~~(18, 53)~~ combined integrally with the frame ~~(17, 52)~~; and
a plurality of insertion holes ~~(25, 59)~~ formed in the core ~~(18, 53)~~ so that the permanent magnets are inserted in the insertion holes ~~(25, 59)~~ respectively.

2. (Currently Amended) A rotor according to claim 1, wherein the core ~~(18, 53)~~ includes magnetic poles having respective inner circumferential faces, and the core is arranged so that a distance between the stator ~~(11)~~ and the inner circumferential face of each magnetic pole is non-uniform with respect to a circumferential direction.

3. (Currently Amended) A rotor according to claim 2, wherein the inner circumferential face of each magnetic pole of the core ~~(18)~~ has two opposite ends having respective distances between the opposite ends and the stator ~~(11)~~, said distances between each opposite end and the stator core ~~(18)~~ is shorter than a distance between a circumferentially central portion of the inner circumferential face and the stator ~~(18)~~.

4. (Currently Amended) A rotor according to claim 1, wherein the core includes a plurality of trough portions ~~(29)~~ provided between respective insertion holes adjacent to each other in the inner circumferential portion thereof, and a distance between an outer circumferential end of each trough ~~(29)~~ and an outer circumferential portion of the core ~~(18)~~ is smaller than a distance between a radial center of the core ~~(18)~~ and the outer circumferential end of the core ~~(18)~~.

5. (Currently Amended) A rotor according to claim 1, wherein each insertion hole has a generally V-shaped or arc section with respect to a direction perpendicular to a radial

direction and each insertion hole ~~(59)~~ has two opposite ends located at an inner circumferential side of the core ~~(53)~~, and each permanent magnet ~~(60, 91)~~ has a generally V-shaped or arc section corresponding to a configuration of each insertion hole ~~(59)~~.

6. (Currently Amended) A rotor according to claim 1, wherein each insertion hole has a generally V-shaped or arc section with respect to a direction perpendicular to a radial direction and each insertion hole ~~(59)~~ has two opposite ends located at an inner circumferential side of the core ~~(53)~~, and the core ~~(53)~~ has a plurality of magnetic poles each of which is composed of two permanent magnets ~~(60)~~ provided in a circumferential one side of each insertion hole ~~(59)~~ and the other side of each insertion hole ~~(59)~~ respectively.

7. (Currently Amended) A rotor according to claim 6, wherein each permanent magnet ~~(60)~~ is formed into a shape of a generally flat plate.

8. (Currently Amended) A rotor according to claim 6, wherein the frame ~~(52)~~ includes an annular wall ~~(56)~~ extending along an outer circumferential face of the core ~~(53)~~, and each insertion hole ~~(59)~~ is open at the outer circumferential face of the core ~~(53)~~.

9. (Currently Amended) A rotor according to claim 1, wherein the frame ~~(17, 52)~~, the core ~~(18, 53)~~ and the permanent magnets ~~(19, 60)~~ are combined integrally with each other by a synthetic resin ~~(35)~~, and the core ~~(18, 53)~~ has a through hole ~~(28, 62)~~ from which a molten synthetic resin is poured.

10. (Currently Amended) A rotor according to claim 9, wherein a distance from the through hole ~~(28)~~ to the outer circumference of the core ~~(18)~~ is shorter than a distance from an axial center in a portion of the core ~~(18)~~ where the core ~~(18)~~ has a maximum axial dimension, to the outer circumference of the core ~~(18)~~.

11. (Currently Amended) A rotor according to claim 9, wherein the through hole ~~(28, 62)~~ is formed nearer to the outer circumference of the core ~~(18, 53)~~ than the permanent magnets ~~(19, 60)~~ in the core ~~(18, 53)~~.

12. (Currently Amended) A rotor according to claim 9, wherein the through hole ~~(28, 62)~~ is formed in the core ~~(18, 53)~~ so as to be located between the magnetic poles.

13. (Currently Amended) A rotor according to claim 1, wherein the frame ~~(17)~~, the core ~~(18)~~ and the permanent magnets ~~(19)~~ are combined integrally with one another by a synthetic resin ~~(35)~~, and each insertion hole ~~(25)~~ includes a magnet disposing portion ~~(25a, 25b)~~ in which the permanent magnet ~~(19)~~ is disposed, a space portion ~~(25b)~~ located in at least one of circumferential both ends of each permanent magnet ~~(19)~~ disposed in the magnet disposing portion ~~(25a, 25b)~~, and a positioning portion ~~(26)~~ positioning each permanent magnet ~~(19)~~ in the magnet disposing portion ~~(25a, 25b)~~, and the molten synthetic resin is poured into the space portion ~~(25b)~~.

14. (Currently Amended) A rotor according to claim 1, wherein the frame ~~(17, 52)~~, the core ~~(18, 53)~~ and the permanent magnets ~~(19, 60)~~ are combined integrally with each other by a synthetic resin ~~(35)~~, and each insertion hole ~~(25, 59)~~ includes a magnet disposing portion ~~(25a, 25b, 59a, 59b)~~ in which the permanent magnet ~~(19, 60)~~ is disposed and a recess ~~(27, 61)~~ defining a space along an outer periphery of each permanent magnet ~~(19, 60)~~ disposed in the magnet disposing portion, and the molten synthetic resin ~~(35)~~ is poured into the recess ~~(27, 61)~~.

15. (Currently Amended) A rotor according to claim 1, wherein a distance from an outer circumferential portion of the core ~~(18)~~ to each insertion hole ~~(25)~~ is longer than a distance from an inner circumferential portion of the core ~~(18)~~ to each insertion hole ~~(25)~~.

16. (Currently Amended) A rotor according to claim 1, wherein the core ~~(18, 53)~~ includes a plurality of unit cores ~~(18a, 71)~~ disposed into an annular form.

17. (Original) A rotor according to claim 1, wherein the core includes a plurality of steel sheets laminated.

18. (Original) A rotor according to claim 1, wherein the permanent magnets are fitted in the insertion holes respectively.

19. (Original) A rotor according to claim 1, wherein each insertion hole has both axial ends, and either one of the axial ends of each insertion hole is closed.